REMARKS

Claims 1-3 and 5-21 are all of the claims presently pending in the application. Applicant has editorially amended claims 1, 8, 20, and 21. Applicant has not substantively amended to the claims.

Applicant believes that entry of this Amendment is proper since the proposed amendments do present no new issues to the Examiner that would require further consideration and/or search.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Applicant gratefully acknowledges the Examiner's indication that claims 2, 5, and 13 would be allowable if rewritten in independent form. Applicant, however, respectfully submits that all of claims 1-3 and 5-21 are allowable.

Claims 20 and 21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Yoshida (JP 2003-021287). Claims 1, 3, 6-12, and 14-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoshida in view of Attwood (U.S. Patent No. 4,911,406).

Applicant respectfully traverses these rejections in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention (e.g., as defined by exemplary claim 1) is directed to a piping connector.

The piping connector includes a socket having a tubular shape attachable to an end of

a first pipe to be connected, a plug having a tubular shape attachable to an end of a second pipe, a seal ring arranged at an inner periphery of the socket for sealing an interval between the inner periphery of the socket and an outer periphery of the plug in an airtight manner, and a hold ring fixedly attached to the inner periphery of the socket for restricting the seal ring from moving in an axial direction. The first pipe and the second pipe are connectable by inserting the plug to fit to the socket. Furthermore, the hold ring includes a groove, having a ring-like shape for constituting a burr storing space, at an outer periphery of the holding ring, and the holding ring is welded to the inner periphery of the socket by ultrasonic welding.

In conventional pipe connectors, which attach a hold ring to a socket by fitting or press-fitting, when a fluid at high temperature and high pressure is made to flow inside of the connected pipe, there is a concern that the hold ring may become detached by loosening of the fitting or press-fitting. Furthermore, during welding, it is a concern that burrs may be brought into contact with the seal ring, which damages the seal ring.

The claimed invention of exemplary claim 1, on the other hand, provides a piping connector including a holding ring that includes a groove, having a ring-like shape for constituting a burr storing space, at an outer periphery of the holding ring (e.g., see Application at page 3, lines 8-23). The claimed invention, including this feature, can be fixedly and solidly attached to an inner periphery of a socket without damaging a seal ring (e.g., see Application at page 3, lines 4-7).

Furthermore, when a groove is formed in an outer periphery of the hold ring, burrs produced when the hold ring is subjected to ultrasonic welding are stored inside of the groove and are prevented from flowing out to an outer portion thereof. Accordingly, burrs can be prevented from flowing out to the side of the seal ring to damage the seal (e.g., see Application at page 3, line 24 through page 4, line 9).

II. THE PRIOR ART REFERENCES

A. The Yoshida Reference

The Examiner alleges that Yoshida teaches the claimed invention of claims 20 and 21. Furthermore, (as detailed below in section B), the Examiner alleges that the combination of Yoshida and Attwood renders obvious the claimed invention of claims 1, 3, 6-12, and 14-19. Applicant respectfully submits, however, that Yoshida (taken alone or in combination with Attwood) does not teach or suggest each feature of the claimed invention.

That is, Yoshida does not teach or suggest "*wherein the hold ring includes a groove, having a ring-like shape for constituting a burr storing space, at an outer periphery of the holding ring, the holding ring being welded to the inner periphery of the socket by ultrasonic welding*", as recited in exemplary claim 1, and somewhat similarly recited in exemplary claims 20 and 21.

Applicant maintains its position presented to the Examiner in the Amendment filed on April 30, 2007 and incorporates the traversal arguments presented in the Amendment filed on April 30, 2007 herein by reference.

In the Response to Arguments section of the Office Action (e.g., see Office Action dated July 16, 2007 at page 8) and in the prior art rejections (e.g., see Office Action dated July 16, 2007 at pages 4-7) the Examiner bases many of his allegations on an Appendix A, which was provided with the Office Action.

Appendix A includes two (2) drawings, which the Examiner created by hand. The actual figures of Yoshida do not clearly illustrate the features depicted in the Examiner's drawings. Furthermore, the disclosure of Yoshida does not appear to describe the features depicted in the Examiner's drawings. Indeed, the Examiner does not even allege that the

written disclosure of Yoshida describes (or even mentions for that matter) the features depicted in the Examiner's drawings. Accordingly, the two (2) drawings included in the Appendix to the Office Action dated July 16, 2007 appear to be merely the Examiner's interpretation of Yoshida not representative of what is actually disclosed in Yoshida.

Furthermore, Applicant submits that the shaped of the hold ring is different in each of the Examiner's drawings. Indeed, in the top drawing, the holding ring has a straight line connecting the alleged large diameter portion and the alleged small diameter portion.

In the second drawing, however, the Examiner altered the portion connecting the alleged large diameter portion and the alleged small diameter portion to include a bent portion to illustrate an alleged groove.

Applicant submits that the top drawing appears related more closely to the structure illustrated in the actual figures of Yoshida than the bottom drawing. Indeed, there is not support in the actual figures or the disclosure of Yoshida for a groove in the holding member.

Moreover, even assuming, *arguendo*, that the Examiners' interpretation of Yoshida, as reflected in the Examiner's version of the figures, is accurate (which Applicant does not admit), Yoshida would still fail to teach or suggest the claimed invention.

Indeed, even the Examiner's illustrations do not teach or suggest "*wherein the hold ring includes a groove, having a ring-like shape for **constituting a burr storing space**, at an outer periphery of the holding ring, the holding ring being welded to the inner periphery of the socket by ultrasonic welding*" (emphasis added by Applicant), as recited in exemplary claim 1.

According to the claimed invention since a groove is formed in an outer periphery of the hold ring, burrs produced when the hold ring is subjected to ultrasonic welding are stored inside of the groove and are prevented from flowing out to an outer portion thereof.

Accordingly, burrs can be prevented from flowing out to the side of the seal ring to damage the seal (e.g., see Figure 1A of the Application).

Yoshida does not teach or suggest this feature of the claimed invention. Indeed, this feature of the claimed invention is not even possible from the teachings of Yoshida.

That is, as illustrated in the Examiner's interpretation of the figures (e.g., see Appendix A of the Office Action dated July 16, 2007), the alleged groove abuts the stepped portion. Accordingly, the alleged groove of Yoshida does not provide a burr storing space, as Yoshida does not provide a space between the alleged groove and the stepped portion. Applicant submits that the Examiner does not even address this feature of the claimed invention in the rejection of claims 1, 3, 6-12, and 14-19.

Therefore, Applicant respectfully submits that Yoshida does not teach or suggest each feature of the claimed invention. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection.

B. The Attwood Reference

The Examiner alleges that the combination of Yoshida and Attwood renders obvious the claimed invention of claims 1, 3, 6-12, and 14-19. Applicant submits, however, that, even if combined, the alleged combination of references would not teach or suggest each feature of the claimed invention.

That is, Applicant submits that claims 1, 3, 6-12, and 14-19 are allowable over the alleged combination of Yoshida and Attwood for similar reasons to those set forth above in section A.

Therefore, Applicant submits that, even if combined, the alleged combination of references would not teach or suggest each feature of the claimed invention. Accordingly,

Applicant respectfully requests the Examiner to reconsider and withdraw this rejection.

III. FORMAL MATTERS AND CONCLUSION

A. 35 U.S.C. § 112, Sixth Paragraph

With respect to claim 21 the Examiner alleges, "*the phrases "first connecting means", "second connecting means" and "holding means" are not considered to invoke 35 U.S.C. 112 6th paragraph as they do not meet each prong of the 3-prong analysis.*" (See Office Action dated July 16, 2007 at page 4). The Examiner's allegation, however, is incorrect.

Applicant submits that a claim limitation will be interpreted to invoke 35 U.S.C. § 112, sixth paragraph, if it meets the following 3-prong analysis:

1) the claim limitations must use the phrase "means for" or "step for";
2) the "means for" or "step for" must be modified by functional language; and
3) the phrase "means for" or "step for" must not be modified by sufficient structure, material or acts for achieving the specified function (see M.P.E.P. § 2181).

With respect to the first prong, Applicant submits that it is not essential to use the phrase "means for" to invoke 35 U.S.C. § 112, sixth paragraph. That is, Applicant need only show that even though the above language is not used, the claim limitation is written as a function to be performed and does not recite sufficient structure, material or acts which would preclude 35 U.S.C. 112, sixth paragraph (see M.P.E.P. § 2181; *Watts v. XL Systems, Inc.*, 232 F.3d 877, 56 USPQ2d 1836 (Fed. Cir. 2000)).

Indeed, while "means for" or "step for" language does not automatically make an element a 35 U.S.C. § 112, sixth paragraph means-plus-function limitation, the absence of such language does not preclude a limitation from being construed as a means-plus-function limitation (see *Signtech USA, Ltd. v. Vutek, Inc.*, 174 F. 3d 1352, 1356, 50 USPQ2d 1372,

1374- 1375 (Fed. Cir. 1999)). **The court indicated that the language "ink delivery means" is equivalent to "means for delivering ink"**. Claim elements without express means-plus-function language may fall within 35 U.S.C. § 112, sixth paragraph if they merely claim the underlying function (i.e., what the element ultimately accomplishes in relationship to what the other elements accomplish as a whole).

The limitations of claim 21 merely claim the underlying function (e.g., connecting or holding). Accordingly, the language of each element of claim 21 satisfies the first prong of the analysis.

With respect to the second prong of the analysis, each of the three elements in claim 21 connects a function (e.g., connecting or holding) to the means. Accordingly, the language of each element of claim 21 satisfies the second prong of the analysis.

Finally, with respect to the third prong of the analysis, none of the three elements in claim 21 is modified by sufficient structure, material or acts for achieving the specified function. Accordingly, the language of each element of claim 21 satisfies the third prong of the analysis.

Therefore, since each of the limitations recited in claim 21 satisfies all three prongs of the analysis, each of the limitations recited in claim 21 invokes 35 U.S.C. § 112, sixth paragraph. Applicant respectfully requests the Examiner to reconsider claim 21 in accordance with the standards set forth by 35 U.S.C. § 112, sixth paragraph.

If the Examiner wishes to maintain that the claim limitations do not invoke 35 U.S.C. § 112, sixth paragraph, Applicant respectfully requests the Examiner to specifically point out which prong the analysis the claims allegedly fail to meet.

B. Claim Objections

Applicant has amended the claims (e.g., claims 1, 8, 20, and 21) in a manner believed fully responsive the Examiner's objections.

C. Specification Objections

Applicant has amended the Specification in a manner believed fully responsive to the Examiner's objections.

D. Conclusion

In view of the foregoing, Applicant submits that claims 1-3 and 5-21, all of the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. Applicant respectfully requests the Examiner to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, Applicant requests the Examiner to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

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Applicant hereby authorizes the Commissioner to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: October 9, 2007

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FACSIMILE TRANSMISSION

I hereby certify that I am filing this paper via facsimile, to Group Art Unit 3679, at (571) 273-8300, on October 9, 2007.

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